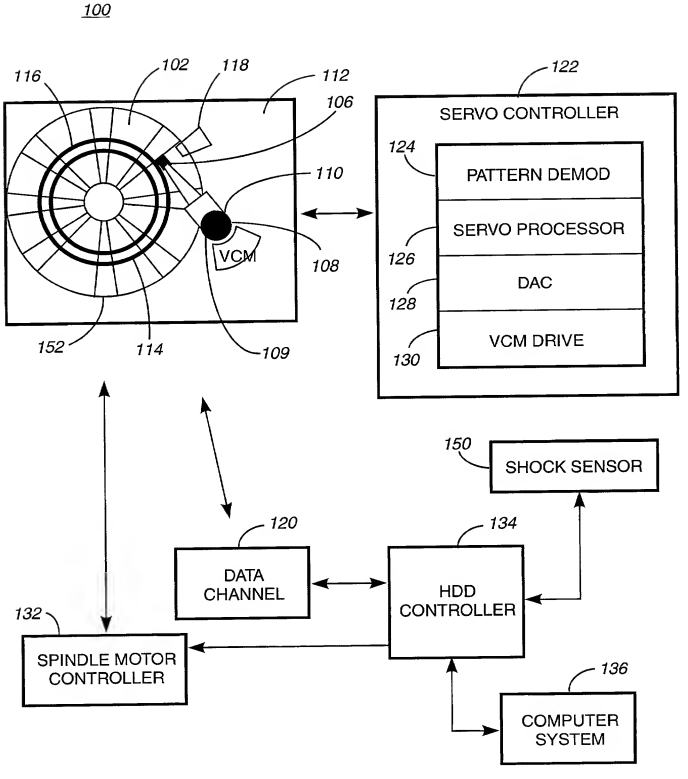
100
116
102
118
112
106
110
108
109
114
152
VCM
122
SERVO CONTROLLER
124
PATTERN DEMOD
126
SERVO PROCESSOR
128
DAC
130
VCM DRIVE
150
SHOCK SENSOR
120
DATA CHANNEL
134
HDD CONTROLLER
132
SPINDLE MOTOR CONTROLLER
136
COMPUTER SYSTEM

FIG. 1

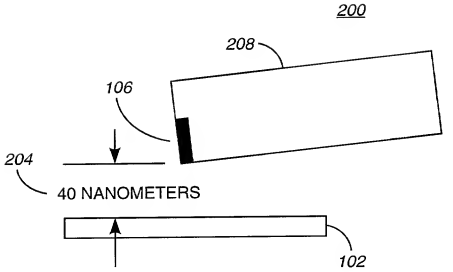
200
208
106
204
40 NANOMETERS
102

FIG. 2

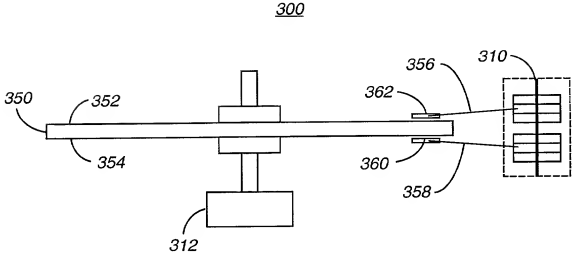
300
356
310
362
350
352
354
360
358
312

FIG. 3

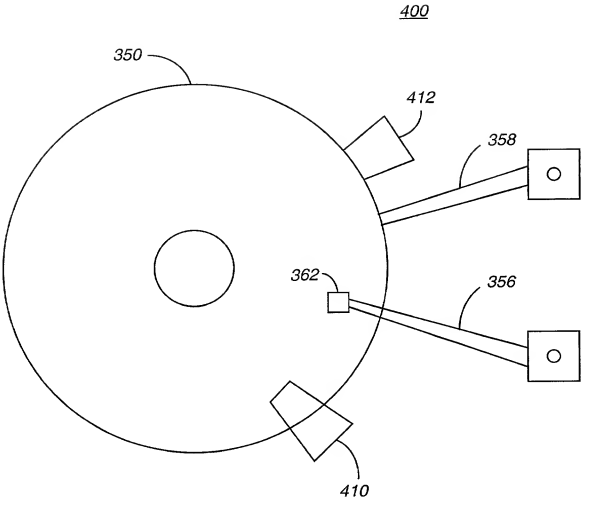

FIG. 4

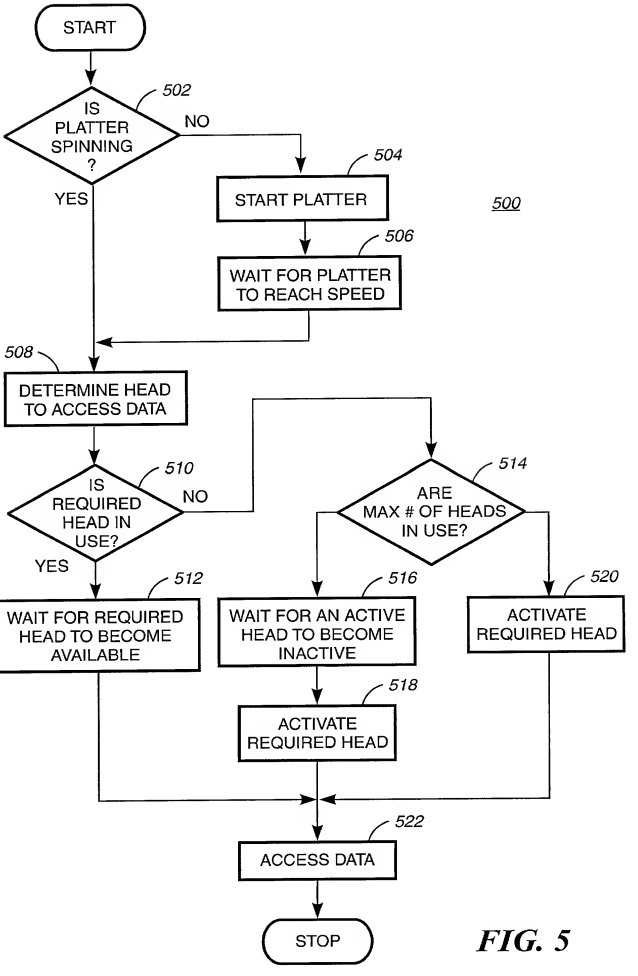
START
IS PLATTER SPINNING ?
502
NO
YES
504
START PLATTER
500
506
WAIT FOR PLATTER TO REACH SPEED
508
DETERMINE HEAD TO ACCESS DATA
IS REQUIRED HEAD IN USE?
510
NO
YES
ARE MAX # OF HEADS IN USE?
514
512
WAIT FOR REQUIRED HEAD TO BECOME AVAILABLE
516
WAIT FOR AN ACTIVE HEAD TO BECOME INACTIVE
520
ACTIVATE REQUIRED HEAD
518
ACTIVATE REQUIRED HEAD
522
ACCESS DATA
STOP

FIG. 5

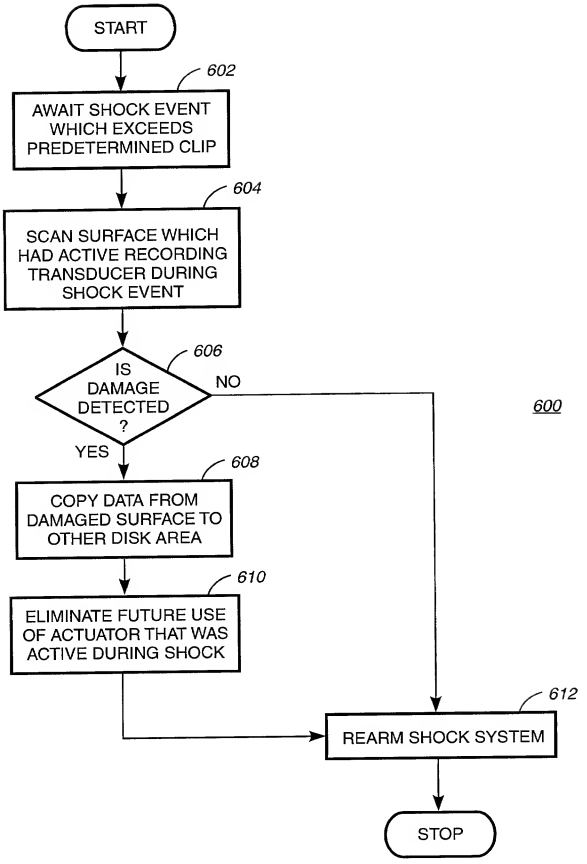
START
602
AWAIT SHOCK EVENT WHICH EXCEEDS PREDETERMINED CLIP
604
SCAN SURFACE WHICH HAD ACTIVE RECORDING TRANSDUCER DURING SHOCK EVENT
606
IS DAMAGE DETECTED ?
NO
YES
600
608
COPY DATA FROM DAMAGED SURFACE TO OTHER DISK AREA
610
ELIMINATE FUTURE USE OF ACTUATOR THAT WAS ACTIVE DURING SHOCK
612
REARM SHOCK SYSTEM
STOP

FIG. 6